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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/025,903	12/26/2001	Kyo Ho Moon	8733.542.00	7621
30827	7590	04/21/2006	EXAMINER	
MCKENNA LONG & ALDRIDGE LLP			PARKER, JOHN M	
1900 K STREET, NW			ART UNIT	
WASHINGTON, DC 20006			PAPER NUMBER	
			2823	

DATE MAILED: 04/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/025,903	Applicant(s) MOON, KYO HO	
	Examiner John M. Parker	Art Unit 2823	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 December 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 December 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Specification

The disclosure is objected to because of the following informalities: pg. 3, line 4, the statement micrometers □m is incorrect. Also, pg. 9, line 16, the statement "explanatory and re intended to" is unclear.

Appropriate correction is required.

Drawings

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference characters "9" and "10" have both been used to designate high voltage generator. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

Art Unit: 2823

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-15 are rejected under 35 U.S.C. 102(e) as being anticipated by Choo et al. (US Pat. #6617584).

The applied reference has a common assignee with the instant application.

Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Regarding claim 1, Choo teaches an X-ray detecting device, comprising:

a thin film transistor having a gate electrode [fig. 3, 36], a source electrode [fig. 3, 38] and a drain electrode [fig. 3, 40] provided on a substrate;

a first protective film covering the thin film transistor [fig. 3, 18];

a first drain contact hole passing through the first protective film [fig. 4d, 24a];

a second protective film provided on the first protective film [22];

a second drain contact hole passing through the second protective film centering around the drain contact hole [fig. 4e, 26a]; and

a transparent electrode connected to the drain electrode via the first and second drain contact holes [fig. 4g, 30].

Regarding claim 2, Choo discloses the X-ray detecting device according to claim 1, wherein the second drain contact hole has a smaller width than the first drain contact hole [the space between layer 18 and electrode 30 shows that the second hole is smaller in width than the first].

Regarding claim 3, Choo teaches the X-ray detecting device according to claim 1, further comprising: a ground line [fig. 3, 20] having the lower electrode of a storage capacitor on the substrate [column 1, line 53];

a first storage contact hole passing through the first protective film covering the ground line [fig. 4d, 24b];

a second storage contact hole passing through the second protective film centering around the first storage contact hole [fig. 4e, 26b];

and a storage electrode electrically connected to the ground line via the first and second storage contact holes [fig. 4f, 30 in contact hole 26b].

Regarding claim 4, Choo discloses the X-ray detecting device according to claim 3, wherein the first protective film is made from an inorganic insulating material [column 2, lines 43-45].

Regarding claim 5, Choo teaches the X-ray detecting device according to claim 3, wherein the second protective film is made from an organic insulating material [column 2, lines 58-63].

Regarding claim 6, Choo discloses the X-ray detecting device according to claim 5, further comprising: a third protective film provided on the second protective film [fig. 3, 32]; and

a pixel electrode electrically connected to the drain electrode via a contact hole passing through the third protective film [fig. 3, 34].

Regarding claim 7, Choo teaches the X-ray detecting device according to claim 3, further comprising: a third protective film provided on the second protective film [fig. 3, 32]; and

a pixel electrode electrically connected to the drain electrode via a contact hole passing through the third protective film [fig. 3, 34].

Regarding claim 8, Choo discloses the X-ray detecting device according to claim 3, wherein the second storage contact hole has a smaller width than the first storage contact hole [fig 3, the space between 18 and 30 shows the width of the second contact hole is smaller than the width of the first].

Regarding claim 9, Choo teaches a method of fabricating an X-ray detecting device, comprising the steps of:

- providing a gate electrode on a substrate [fig. 4a, 36];
- providing a gate insulating film on the substrate [fig. 4b, 12];
- providing a semiconductor layer on the gate insulating film [fig. 4c, 14];
- providing a source electrode [fig. 4c, 38] and a drain electrode [fig. 4c, 40] on the gate insulating film;
- providing a first protective film on the gate insulating film [fig. 4d, 18];
- providing a first drain contact hole passing through the first protective film [fig. 4d, 24a];
- providing a second protective film on the first protective film [fig. 4e, 22];

Art Unit: 2823

providing a second drain contact hole passing through the second protective film centering around the first drain contact hole [fig. 4e, 26a]; and

providing a transparent electrode on the second protective film [fig. 4f, 30].

Regarding claim 10, Choo discloses the method according to claim 9, wherein the first drain contact hole has a larger width than the second drain contact hole [the space between layer 18 and electrode 30 shows that the first hole is larger in width than the second].

Regarding claim 11, Choo teaches the method according to claim 9, further comprising the steps of:

forming a ground line simultaneously with the source and drain electrodes [column 2, lines 29-31];

forming a first storage contact hole passing through the first protective film covering the ground line [fig. 4d, 24b];

forming a second storage contact hole passing through the second protective film centering around the first storage contact hole [fig. 4e, 26b]; and

forming a transparent electrode on the second protective film [fig. 4f, 30].

Regarding claim 12, Choo discloses the method according to claim 11, further comprising the steps of:

forming a third protective film on the second protective film [fig. 3, 32]; and

forming a pixel electrode on the third protective film [fig. 3, 34].

Regarding claim 13, Choo teaches the method according to claim 11, wherein the first storage contact hole has a larger width than the second storage contact hole

Art Unit: 2823

[the space between layer 18 and electrode 30 shows that the first hole is larger in width than the second].

Regarding claim 14, Coo discloses the method according to claim 11, wherein the first protective film is made from an inorganic insulating material [column 2, lines 43-45].

Regarding claim 15, Choo teaches the method according to claim 11, wherein the second protective film is made from an organic insulating material [column 2, lines 58-63].

Priority

Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The additional cited art teaches similar structures and methods to those instantly claimed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John M. Parker whose telephone number is 571-272-8794. The examiner can normally be reached on Monday - Friday 8am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew S. Smith can be reached on 571-272-1907. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2823

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

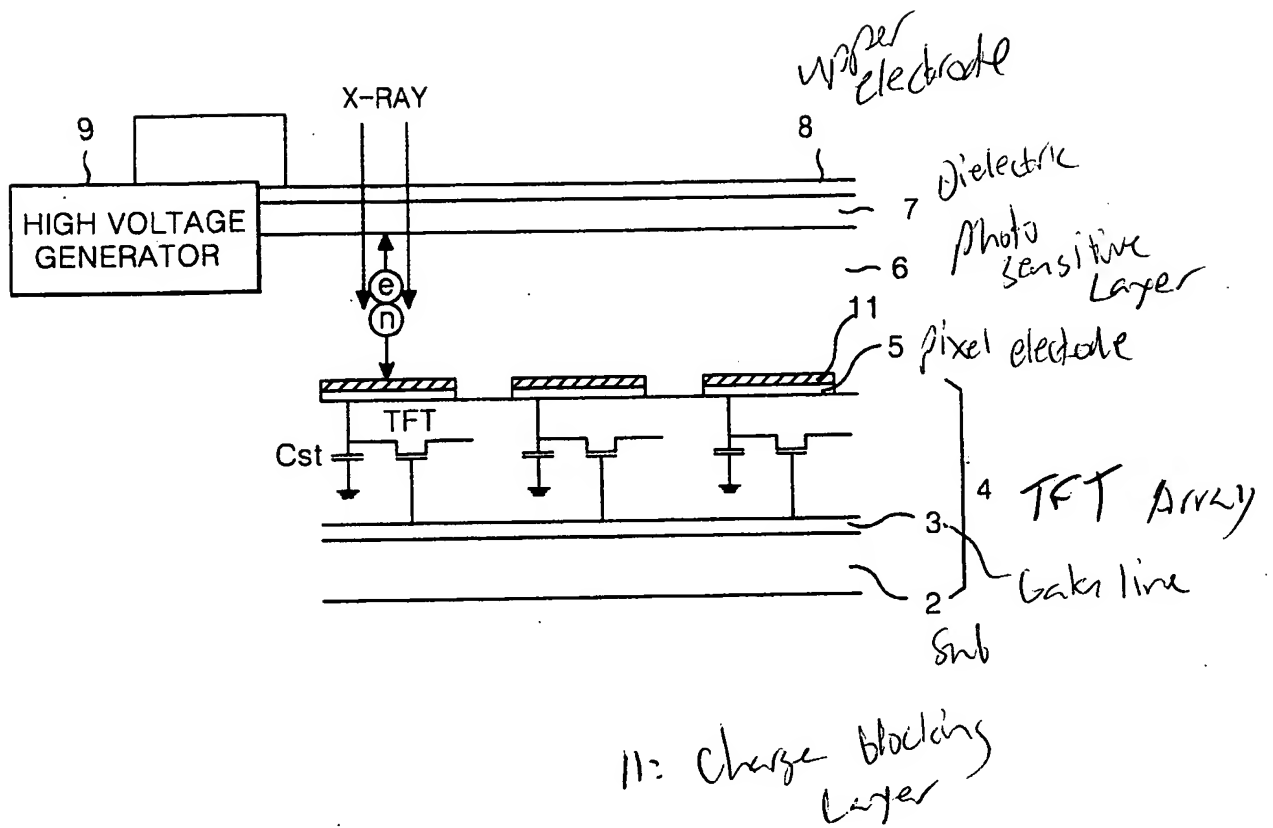


John M. Parker



MATTHEW SMITH
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800

FIG.1
CONVENTIONAL ART



109221-20652001

FIG. 2
CONVENTIONAL ART

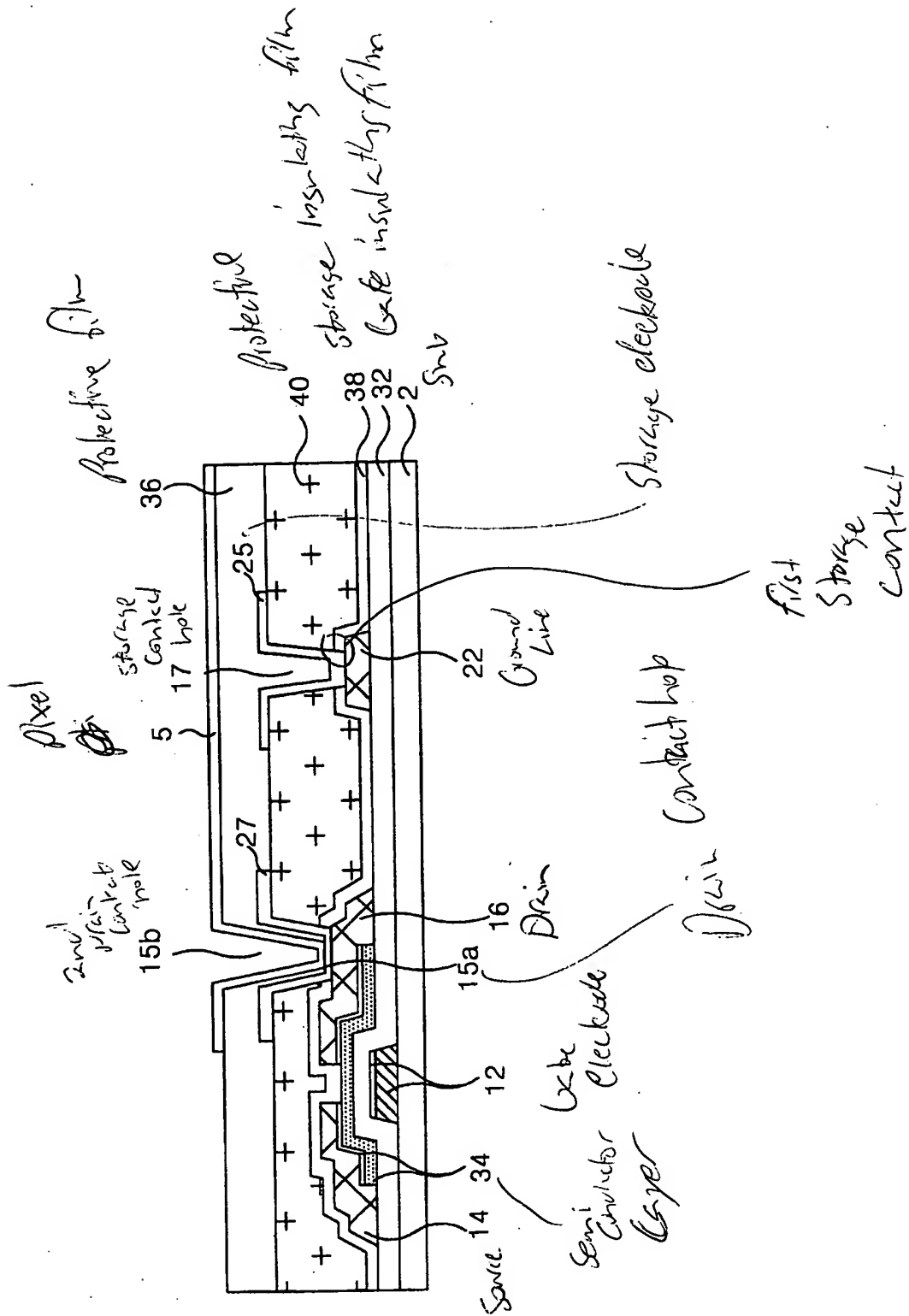


FIG. 3A

CONVENTIONAL ART

isb & end
Gate metals

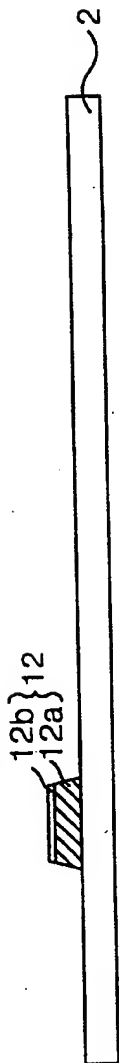


FIG. 3B

CONVENTIONAL ART

active layer & ohmic
contact layer

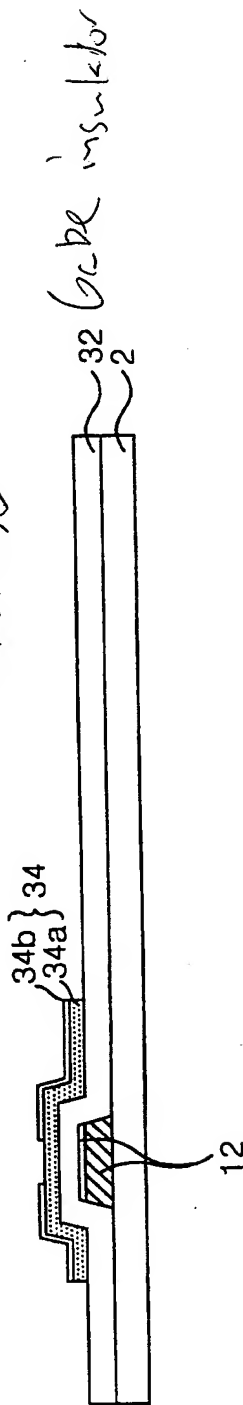


FIG. 3C
CONVENTIONAL ART

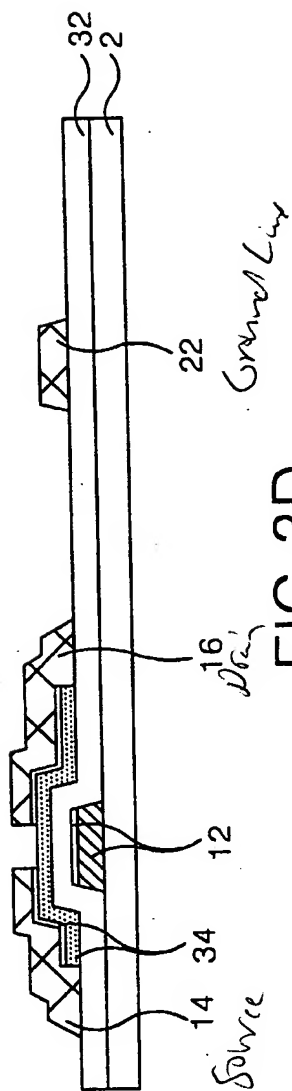


FIG. 3D
CONVENTIONAL ART

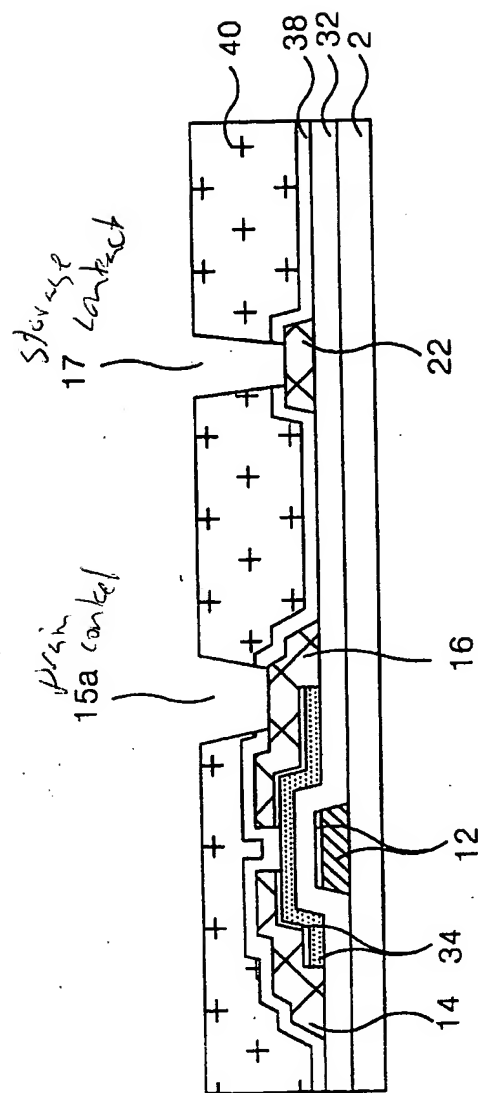


FIG.3E
CONVENTIONAL ART

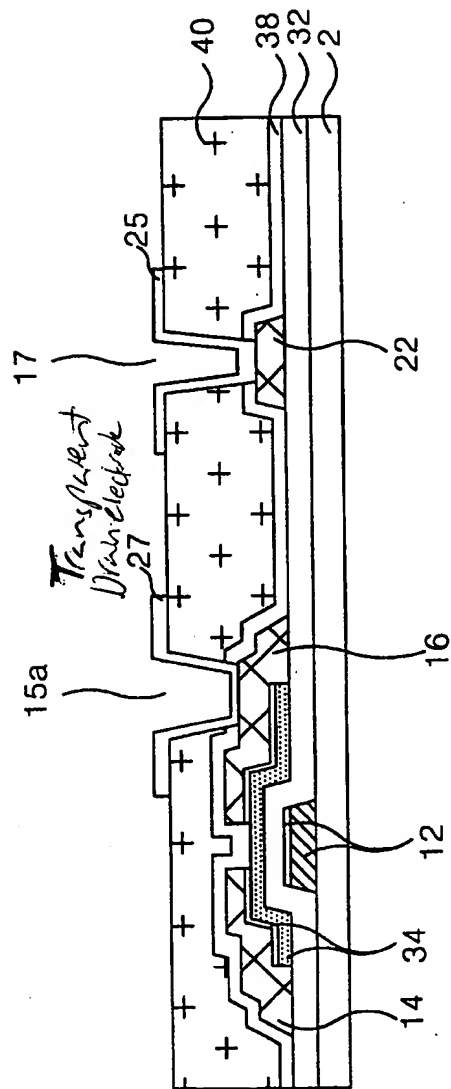


FIG. 3F
CONVENTIONAL ART

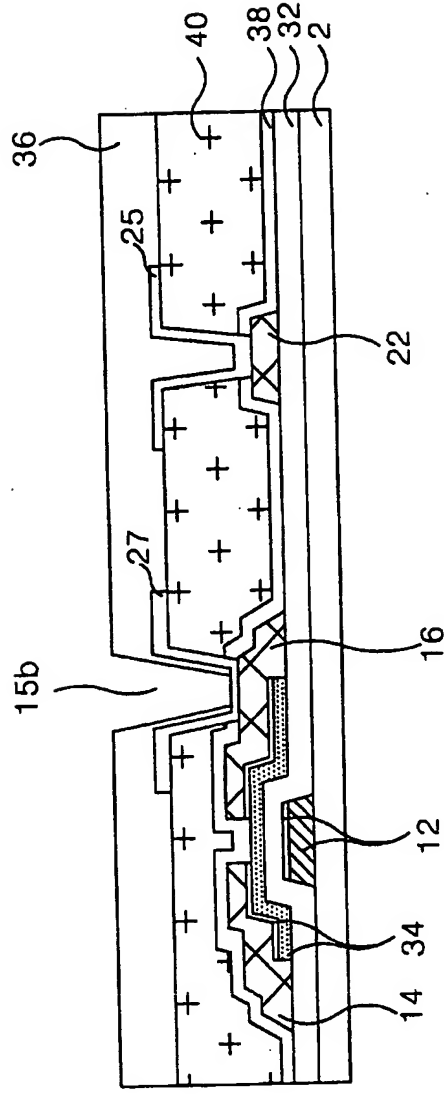


FIG.3G
CONVENTIONAL ART

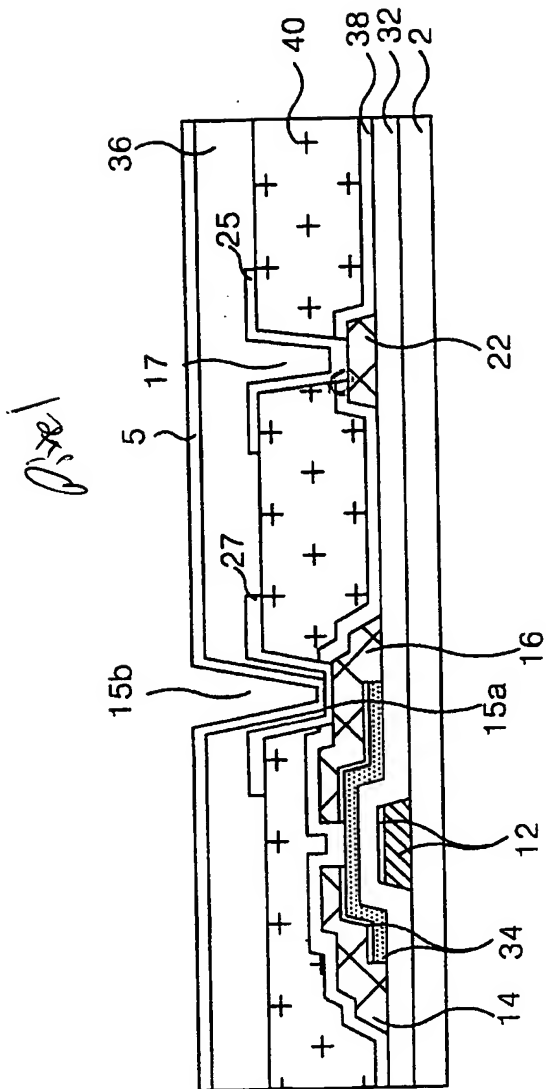


FIG. 4

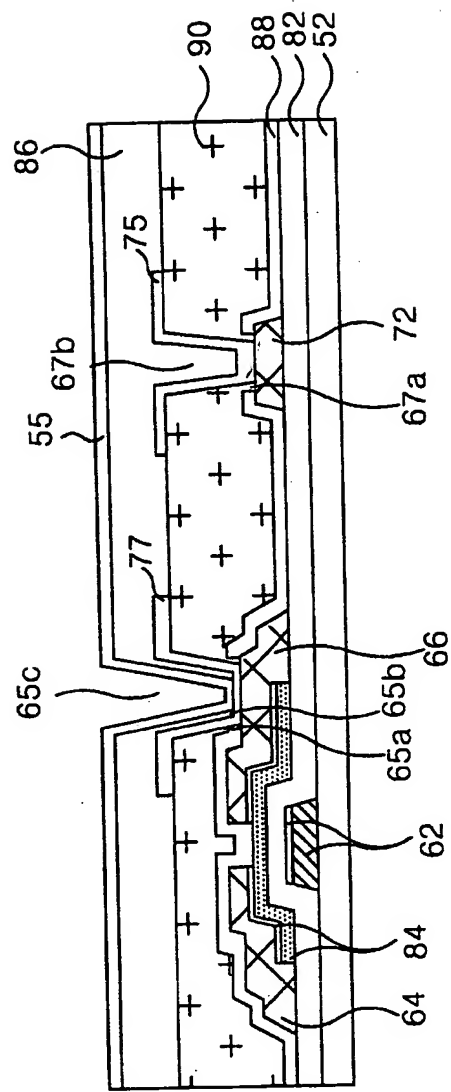


FIG. 5A

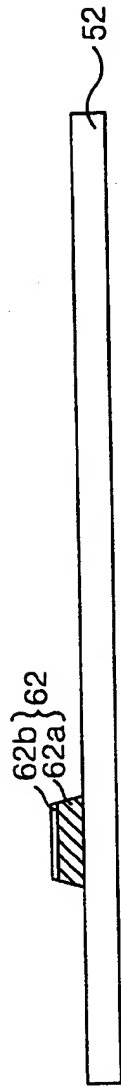


FIG. 5B

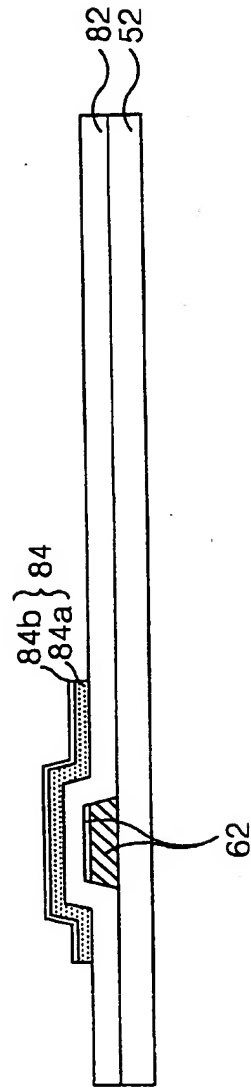


FIG. 5C

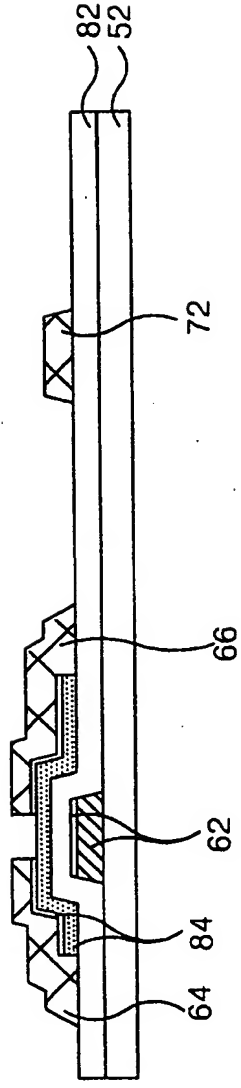


FIG. 5D

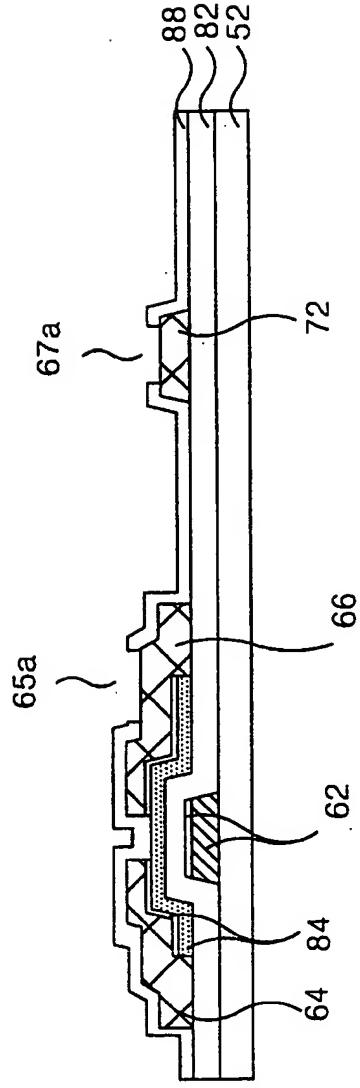


FIG. 5E

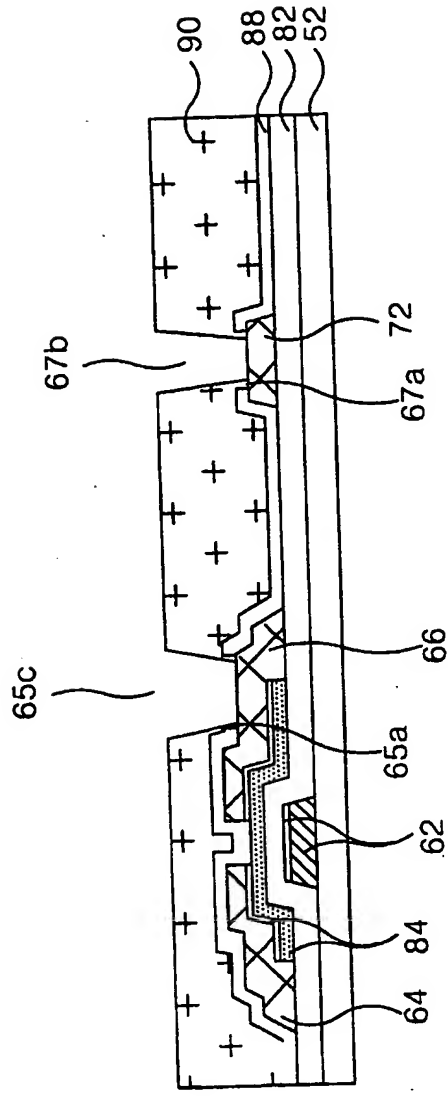


FIG. 5F

